

Dangerous Ideas in Zoology: Plenary session 2

Following the second session of the forum we held a question and answer session facilitated by Paul Willis. The presentations covered by this plenary session were:

- Baraminology - a tool for increasing creationist students' receptivity to speciation (Mike Calver, Murdoch University)
- Dangerous past, dangerous futures (Paul Adam, University of NSW)
- Keeping faith with death (Thom van Dooren and Deborah Rose, University of NSW)
- Vegetarians – bad for the environment? Rubbish! (Ian Wallis, Australian National University)
- Conservation needs extinction (Peter Banks and Dieter Hochuli, University of Sydney)

The following is a transcript of the plenary session edited for readability.

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PAUL WILLIS (MC): Thank you very much, Arthur. Because of the divine intervention that we had this morning [fire alarm, everyone had to leave the building], and so questions haven't been able to be asked, I really would like to invite your questions in this plenary. So let's dive straight in the deep end.

Mike Calver, in talking about how to deal with creationist students, there was one approach that you didn't actually cover, and that's the approach that I now take, which is: bugger them. Really, it does drive quite deeply at the question of why bother engaging, what is the end gain, what is the point of engaging with creationist students.

Do we expect that we're going to change their mind? Do we expect that they're going to reject what is often a life-long tradition or a life-long experience of creationism, usually from a fundamentalist background? I mean, if they're a student in a biology class and the end result is to teach them biology, well, why bother engaging them in trying to convince them other than just say, "This is the true path, it's called evolution"?

MIKE CALVER (Murdoch University): That certainly sounded like a religious idea at the end, calling them to the light to see the truth. There are sufficient numbers of creationist students, in some cultures more than others, to be making a significant problem for biological education. Some authors have gone as far as to say that it's crippling it. You can very well say "bugger them", but as people are reporting from the UK at the moment, Islamic students are getting up and walking out of the lecture theatre in protest when evolution is being raised. In parts of the United States, people are saying that they have somewhere between 30 and 40 per cent of creationist students in their classes. Proportions are even higher amongst the people who are training to be teacher- education students.

We have ambassadors for ignorance and I use that term very, very strongly. If you look at what serious theologians are saying when they argue that creationism is not simply bad science, it's also bad theology, to actually

say "bugger them", not to engage them, to let them go out and to continue to promulgate those ideas without even an understanding of what evolution might be is particularly disturbing, especially given those statistics about people in teacher education courses. They're going into secondary schools, which is all the science education many of the population will get.

I don't think it should be ignored. I think it needs to be confronted in the same way as people confront ignorance about vaccination, or ignorance about other aspects of preventive medicine. I think, in the interests of believing in our biology, we need to talk to the creationists, and I didn't actually ignore it. "Bugger off" I put it a little bit more tactfully; I just said "ignore".

PAUL WILLIS: My job is to provoke, so provoke I must. We've got some questions. Who could draw more attention to their presentation than Paul Adam by setting off the fire alarms: that was a master stroke there.

NATALIE ROGERS (University of New South Wales): I would argue that if we really wanted to challenge creationists, don't wait until university. Why can't we challenge them as children? There's Scripture being taught in a lot of primary schools, but the alternative to Scripture is having kids sitting in a room, doing nothing. Why can't we challenge some of these ideas in that sort of forum so children grow up being exposed to evolution as well as being exposed to their other religious ideas? My main gripe with Scripture in schools is that it's often seen as, "Faith makes you a good person." Why can't we challenge some of these ideas to children, to very young children, and then we wouldn't have these problems when they get into secondary school and then into university?

PAUL WILLIS: Mike, do you want to have a crack at that? Get them while they're young, another lesson from the Jesuits.

MIKE CALVER: I started off with the idea of talking about biology education and the ideas that have just

Dangerous Ideas in Zoology: Plenary Session 2

been raised go beyond biology education into a wider educational curriculum. The interesting thing, of course, is that the idea of the secular primary and secondary school education already exists in the United States. So they, for instance, in the public schools cannot teach religion, and yet it is still in the teaching of science in those public schools that they have a problem.

I do agree that the way in which we view our education curriculum is very important, the way in which we teach morals and the idea that you can have morals without religion, but despite all those particular viewpoints, if we come back again to the idea that there's a home influence, it's a very strong one. I don't think we're going to get away from the creationist student. We still need to deal with it in the biology classes and, furthermore, perhaps we need to be building better bridges with the serious religious thinkers who quite bluntly are saying there is no problem. Maybe those who are teaching religion in whatever aspect need to be more aware of some of this advanced theological thinking.

PAUL WILLIS: That's certainly one of my disappointments in dealing with creationists is that you can find Christian geology associations and Christian evolution based organisations, and I'm disappointed that they're not out there doing more to say, "You can still have a Christian belief, you can still have a religious belief, but that doesn't mean that you need to reject evolution." I'd just like to throw that as a comment.

TERRY KORN (Australian Floodplain Association): A question to the academics, Mike Archer, Mike Calver, Chris Dickman: what have you done, in your undergraduate courses, in response to a really bright creationist student who has requested to move on to higher studies?

MIKE ARCHER: First of all, I'd have to say we've been monitoring the same Gallup poll since 1986 every single year, we've got the longest running assessment of Australian students' responses in the same class to those questions about their belief systems. Suffice to say, I'm delighted to report it was a fright to a lot of my colleagues who discovered there were creationists in our first year biology classes.

But the delight is that, despite what those creationists told me, "Watch this line, it's going to go up," that line has steadily gone down. It's only about 7 per cent of our undergraduate body, and in fact there's been a massive shift over that time from people who originally were ready to say, "God has had nothing to do with the development of humans," which was only about 25 per cent in 1986 - and it's now well over 50 per cent - and the theist line has gone down, the non-theist line has gone up, and we weren't even expecting that. It's fascinating.

But to answer that question about, "What do you do if you get a student who comes in who's a creationist?"

I did have one, without mentioning names. It was interesting, I didn't know he was a creationist, and he came in wanting to do an honours project. Actually, I suspect he was a bit of a plant, because it was their conviction that, as palaeontologists, we were making up these stories about the evolution of animals. It just so happens the one group that we had that he could research that I hadn't had anybody studying was wombats, so he was given all of the samples of wombats with no preconceptions from us about what represented - that spanned about 24 million years. We did know that in the oldest deposits there were small crowned things with big roots, and in the higher deposits they had lost their roots, and they were completely, totally crowns as in modern wombats.

We didn't think anything of this, but the other students told me that, as he began to study this, understanding where it had come from - and he'd been in the field with us - he kind of went into shock. It was interesting. They said they saw him at night, sort of beads of sweat on his forehead, and said, "This can't be true, this can't be true," and yet he himself had no choice but to discover that he had in his hands all the evidence that wombats had been evolving through time, and eventually he wandered off mumbling, and we never saw him again.

PAUL WILLIS: I just want to go to a general question which actually touches on a couple of the presentations that we've had this morning, because we don't have a lot of time left in this plenary, and that comes around the question of extinctions and de-extinction. Perhaps if we go first to Thom. Can't we have both? I mean, isn't conservation biology - isn't the field of zoology big enough that we can have some people working in de-extinction, we can have others working on the paradigm of we do need to appreciate the fact that we've got species that we're losing before our very eyes, and we need to come to terms with extinction as a living process?

THOM VAN DOOREN (UNSW): That's a good question, but the issue would be whether one of them ends up undermining the other. I guess the fear that I have and the fear that other people have - and Peter put it very well, I think - is that there are a whole range of different potentials for de-extinction to undermine the efforts that have gone into conservation. A lot of my recent work has been in Hawaii, where I deal with a lot of the politics of conservation which is grounded in long histories of occupation and American colonial presence in Hawaii, and the notion that conservation is always coming from the outsiders and always being driven by illegal governments. It's an incredibly complicated political context in which you might try and conserve something, and there are so many things in Hawaii to conserve.

The notion that we might introduce new problems, new species which would be perceived as new problems into an environment like that - there just is not the space for

them. When we talk about environments and needing an environment in which to release these things, habitat, we have to also consider the local human people, the local communities, not just the biological ecosystem. No, I think not. I think that the potential for undermining that conservation work through de-extinction is too great.

PAUL WILLIS: If we can just skip along, because I'm just aware of the time, to Peter. On that question, it sounds obvious that you can't see the two can co-exist. The undermining of de-extinction on extinction is too important.

PETER BANKS (University of Sydney): Yes, once de-extinction happens, conservation biology would have lost the term "extinct". We won't have "extinction" as a term we can use any more. So I think the framework for conservation biology will have to change, because everything can potentially be brought back; that line in the sand won't be there. That was the thrust of my talk, and I think that still holds in relation to your context. I

don't think the two can be compatible. I'd be interested to hear if other people think that they can be, but I can't see it because, as I said in my talk, you can't see un-see what's possible. Once you've seen something is possible, you can't un-see it, and I think that's what will happen once de-extinction happens. So conservation biology will have to work out what it is if it doesn't have extinction.

PAUL WILLIS: All right. Just to wrap up this session, I would like to thank Peter for bringing Bob the Builder into this morning's proceedings. My favourite thing with Bob the Builder is that in German it is, "Bob der Baumeister. Können wir es beheben? Bob der Baumeister. Ja wir können" And also thank you very much to Thom, I think, who introduced Biz Magazine into the proceedings with that wonderful advert for lard. Biz Magazine, if you don't know it, ladies and gentlemen, is the only journal I've subscribed to continuously for the last 20 years. It's an English satirical magazine, and it has the best swearing dictionary, the Profanisaurus. I recommend you all get a copy. Thank you very much.

PHOTOGRAPHS



Mike Calver (RZS NSW Councillor).

Photo by Dan Lunney.



Thom van Dooren.

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Dangerous Ideas in Zoology: Plenary Session 2



Paul Adam FRZS.
Photo by Dan Lunney.



Ian Wallis making his point.
Photo by Dan Lunney.



Peter Banks.
Photo by Dan Lunney.



RZS NSW Councillors Mike Calver (holding microphone), Adele Haythornthwaite and Peter Banks.
Photo by Dan Lunney.

Dangerous Ideas in Zoology: Plenary Session 2



The audience during the second plenary.

Photo by Dan Lunney.



Paul Adam FRZS.

Photo by Dan Lunney.



Paul Willis interrogating.
Photo by Dan Lunney.



Thon van Dooren
answering a question.
Photo by Dan Lunney.

Dangerous Ideas in Zoology: Plenary Session 2



Peter Banks FRZS and Mike Archer FRZS discussing extinction at lunch.

Photo by Dan Lunney.



Thom van Dooren.

Photo by Dan Lunney.